

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

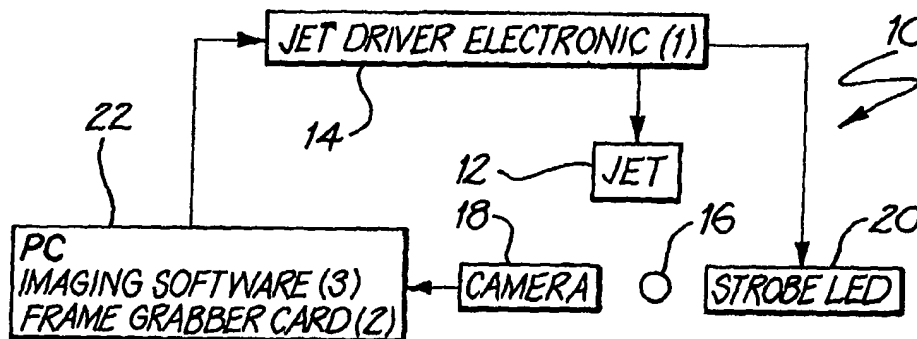
PCT

(10) International Publication Number
WO 2005/005963 A1

- (51) International Patent Classification⁷: **G01N 11/04** (74) Agent: **F B RICE & CO**; 605 Darling Street, Balmain, NSW 2041 (AU).
- (21) International Application Number: **PCT/AU2004/000929** (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: **12 July 2004 (12.07.2004)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
2003903561 **10 July 2003 (10.07.2003)** **AU**
- (71) Applicant (for all designated States except US): **PROTEOME SYSTEMS INTELLECTUAL PROPERTY LTD [AU/AU]**; Unit 1, 35-41 Waterloo Road, North Ryde, NSW 2113 (AU).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **DUFF, Janice, Lee [AU/AU]**; 14 Beulah Street, Kingsford, NSW 2032 (AU). **BREEN, Edmond, Joseph [AU/AU]**; 6 Gooraway Place, Berowra, NSW 2082 (AU). **HOPWOOD, Femla [AU/AU]**; 8 Marconi Street, Winston Hills, NSW 2153 (AU). **MUELLER, Martin [DE/DE]**; Sanschurrepfad 39, 12557 Berlin (DE).
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (48) Date of publication of this corrected version:
31 March 2005

[Continued on next page]

(54) Title: "SYSTEM AND METHOD FOR AUTOMATICALLY SETTING OPERATING PARAMETERS FOR MICRO-DISPENSING DEVICES"



(57) Abstract: A process for automating the setting of parameters for a micro jetting system for dispensing reagents and a jetting system and control system arranged to perform the process of the present invention are disclosed. The parameters which are adjusted by the system, are voltage level and pulse duration. Typically, the process works by cycling through a plurality of combinations of the two parameters, imaging droplets produced by each of those parameters and analysing those images to detect whether a droplet is formed, and if so, whether that droplet is suitable. In a particularly preferred approach, a statistical approach is used to generate a range of appropriate parameter combinations and an associated likelihood of each of those parameter combinations being acceptable. In particular, the selection of parameter combinations starts with the statistically most popular occurrence of voltage and pulse duration and then alternates either side of the most popular occurrence with the next most popular occurrence which has not yet been used, until an acceptable droplet is produced.



(15) Information about Correction:

see PCT Gazette No. 13/2005 of 31 March 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.